REMARKS

In accordance with the foregoing, claims 1, 6, 7, and 11 have been amended. Claims 12-14 have been cancelled. Claims 1-11 are pending and under consideration.

Claims 1-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 6,550,004 (Henry) in view of U.S. Pat. No. 6,108,775 (Shiell) and U.S. Pat. No. 6,374,349 (McFarling).

Applicants respectfully submit that independent claims 1, 6, 7, and 11 are patentable over the references, as none of the references, taken alone or in combination, teach or suggest the features of the present invention.

Henry is directed to a branch predictor for allegedly improving branch prediction accuracy. The branch predictor includes global and local Agree dynamic branch predictors. According to Henry, the dynamic predictors include history table X 302 and history table Y 304, respectively, coupled to index generation logic 312 and 314, respectively. Henry further states that the index generation logic 312 and 314 include exclusive OR gates for hashing a portion of an address of a conditional branch instruction and a portion of the global history to generate an index into the history tables.

According to Henry, the branch predictor also includes a multiplexor 206 that receives two dynamic branch prediction signals 242 and 244 and selects one of the dynamic prediction signals 242 and 244 for generating a selected Agree/Disagree output signal 262 to a correlator 208. The multiplexor 206 selects one of the two dynamic branch prediction signals 242 and 244 to forward to output 262 based upon a selection input 286. *See* Henry, column 9, lines 12-19. *See also* Henry, Figs. 2 and 3.

The Examiner attempts to equate the history table 302 of Henry (part of the dynamic predictor X 202 shown in Fig. 2) to the claimed history table of the present invention, and further attempts to equate the multiplexor 206 of Henry to the claimed selection unit of the present invention. As can be understood from the connections between elements illustrated in Fig. 2 of Henry, in contrast to the present invention, a selecting action performed by the multiplexor 206 of Henry to select one of the inputs is not dependent on an output from the dynamic predictor X 202 (that is, is not dependent on an output from the history table 302). Therefore, there is no teaching or suggestion in Henry regarding selection depending on whether a history table indicates a hit or a miss, as recited by the language of the claims of the present invention.

Assuming *arguendo* that a selecting action performed by the multiplexor 206 of Henry is

dependent on an output from the history table 302, such output for controlling the selecting action cannot be a hit/miss result of the history table 302 of Henry, as unlike the present invention, the history table 302 of Henry does not have a tag, based on which a hit/miss would be judged.

Shiell is directed to branch prediction in a microprocessor that is based upon program type. Although Shiell discloses a multiplexor, Shiell merely states that the multiplexor is affected in response to a user/supervisor state on a line U/S and a state of a global bit G. *See* Shiell, column 12, lines 60-64. Therefore, Shiell does not disclose or suggest, "selecting one of the first value and the second value depending on whether said history table indicates a hit or a miss."

McFarling is directed to a branch prediction mechanism that allegedly minimizes time lost to erroneous predictions that necessitate both a purge and a reload of affected pipelines to a processor. McFarling merely discloses a bimodal predictor stage and does not disclose or suggest, "selecting one of the first value and the second value depending on whether said history table indicates a hit or a miss."

In light of the foregoing, Applicants respectfully submit that independent claims 1, 6, 7, and 11 are patentable over the references, as none of the references, taken alone or in combination, teach or suggest the claimed features of the present invention. As dependent claims 2-5 and 8-10 depend from respective independent claims, the dependent claims are patentable over the independent claims for at least the reasons presented above for the independent claims.

Claims 12, 13, and 14 were rejected under 35 U.S.C. § 102(e) as being anticipated by McFarling. Applicants have cancelled claims 12, 13, and 14, thereby rendering the rejection of claims 12, 13, and 14 moot.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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